
continuing federal stewardship of sites with radioactive hazards may be necessary for many years to come.” DOE, he says, “needs to take steps now to reduce sharply the extravagant spending levels of the past that have been justified to the American public by the state goals — however impossible to realize — of total site cleanups.”◀

Technology Brief

VEHICLE-MOUNTED RAD-SCREENING TECHNOLOGY

Researchers at the Idaho National Engineering and Environmental Laboratory (INEEL) have tested a new method of scanning large areas of land for radiological contamination to ensure free-release criteria are being met, and the technology is proving more efficient and cost-effective than current hand-held scanners. The new system, the Global Positioning Radiometric Scanner (GPRS), uses a four-wheel-drive-vehicle-mounted detection system, a differential global positioning system, and a portable computer to characterize large areas of land in a short time while, at the same time, reducing potential exposures to technicians. The system was purchased by DOE from TSA Systems Inc. of Longmont, Colo., and demonstrated at INEEL’s Initial Engine Test facility in September 1999 by the Energy Dept.’s Office of Science and Technology Deactivation and Decommissioning Focus Area.

The existing land-characterization system consists of a hand-held sodium iodine detector carried by a single technician walking through a particular area to gather radiological data. During the manual survey, the technician must record all relevant information, including changes in elevation; the data is later transcribed to a map. Technicians complain the existing system is needlessly time-consuming and potentially dangerous. Researchers found use of the GPRS resulted in a 76 percent reduction in labor hours; an increase in the number of survey data points; more accurate and reproducible data; the immediate availability of results; and a visual representation of the findings.

For comparison purposes, the GPRS and the hand-held technology analyzed an 80-foot-by-100-foot trench covered by soil and wheatgrass. The GPRS completed its survey in 15 minutes, while the hand surveyor was in the field for 65 minutes. In addition, the hand survey required two technicians to mark off a grid so that the survey results could be properly transcribed to a map. The GPRS used the global positioning technology to electronically record all samples, and a computer program mapped and interpreted the results in about 10 minutes. Overall, researchers concluded the GPRS is easier to operate than the hand-held equipment; provides a larger ‘window of view’; is faster and more efficient than the hand-held equipment; provides more real-time data than the hand-held equipment; and produces final reports that include visual displays of the contamination survey area.

The technology report, titled *Global Positioning Radiometric Scanner System* (DOE/EM-0541) warns, however, that the GPRS does have some limitations. For example, the technology can only detect gamma-emitting radionuclides, allowing alpha and beta-emitting radionuclides to go unnoticed. The researchers suggest that historical data be referenced for all survey areas to identify the presence of all possible contaminants. In addition, weather and soil conditions can affect GPRS readings. As a result, the report recommends the system be fitted with a soil moisture probe, which can provide frequency measurements to determine if the soil conditions are affecting the data.

The greatest consideration in the use of the GPRS is cost, the researchers warn, and suggest that the large capital investment must be weighed against the expected frequency of use. For a large facility such as INEEL, with 890 square miles and thousands of acres to survey, there is little doubt the GPRS will offer substantial value, they report.

The system costs range from \$35,000 for the basic model to \$57,800 for a more complete system; the INEEL researchers demonstrated the top-of-the line system. The cost of vehicles also varies greatly, and the researchers made no recommendations on what kind of four-wheel drive vehicle to use. The demonstration equipped a \$63,600 Hummer. Additional costs also will be incurred for annual calibration, estimated at \$1,500 per year, and for a satellite subscription for the differential correction signal, approximated at \$900 per year.

The report states those costs can be recovered rapidly, mostly through labor cost-savings. Researchers estimate the GPRS saves approximately ½ cent per square foot over the hand-held technology, which means the \$121,404 demonstration costs of the system can be recovered after surveying 558 acres. “The initial capital investment into this technology could be paid off in a relatively short time depending upon the amount of large area surveys needing to be characterized. As shown with this demonstration, a 77 percent labor savings was calculated,” the report explained. “However, if the end user has limited use for this technology, it may be too costly.” The researchers also note the most expensive configuration of equipment was used for the demonstration. The cost of equipment could be reduced by another 25 percent, reducing overall costs by 12 percent.

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Interview

ON ATG'S CASH CRUNCH CHIEF OPERATING OFFICER VIK MANI

The following interview with ATG, Inc., Chief Operating Officer Vik Mani was conducted by Exchange Monitor Publications Editor-In-Chief Christopher Logan. ATG officials requested the interview to clarify the company's financial position after a story appeared in the March 19 issue of Weapons Complex Monitor (Vol. 12 No. 11) reporting the company faces serious short-term cash-flow problems.

Vik, we've spoken to a lot of people about ATG and everyone seems to agree your technology works. And we know the Energy Dept. is relying on ATG to treat a fair amount of defense waste. The question on a lot of people's lips, though, is whether the company itself is financially viable. To put it bluntly, can ATG continue to operate?

ATG, right now, is in a liquidity constrained situation, so we have gone into a very high gear of very closely watched cash-flow management. We have established a cash-flow management council, which we originally set up to meet every week; after we looked at the company's liquidity situation, we are meeting every day. The principal duties of council are to look at, on a daily basis, the amount of cash coming into the company and what the accounts-receivable look like over 30 days, 60 days, 90 days and beyond. We've assigned management responsibilities to go to our customers for invoicing and collecting, to focus on accounts payables. That last part is the most important piece to us now; we have dedicated people to work on receivables.

Who serves on this cash-flow council?

The council includes the company CEO, Doreen Chiu; Acting Chief Financial Officer Dennis Williamson; two operations vice presidents for production; the comptrollers from each site; and myself.

And this council, essentially, from what you've said, makes sure the amount of cash going out isn't greater than the amount of cash coming in. Basic financial management.

Yes, we are focusing on the fundamentals of sound business management. We look closely at payables. We determine what is the most important, the most critical thing to pay that day or that week, such that the business can continue and operations can continue uninterrupted and profitably. Based on that, we set up on April 1 a 13-week in-and-out cash flow